



**Item 431-J-15**

## Cooperative Research and Development Agreement With the Environmental Research Consortium and the State of California

### *Measurement Technologies for Motor Vehicle Emissions*

#### Participants

This Cooperative Research and Development Agreement (CRADA) brings together engineers and scientists from the U.S. Environmental Protection Agency (EPA), Chrysler, Ford, General Motors, Navistar, and the California Environmental Protection Agency's Air Resources Board (CARB). Industry participants in the project will work under the auspices of the United States Council for Automotive Research (USCAR) and USCAR's Environmental Research Consortium (ERC). Collectively, the participants are known as the American Industry/Government Emissions Research (AIGER) CRADA.

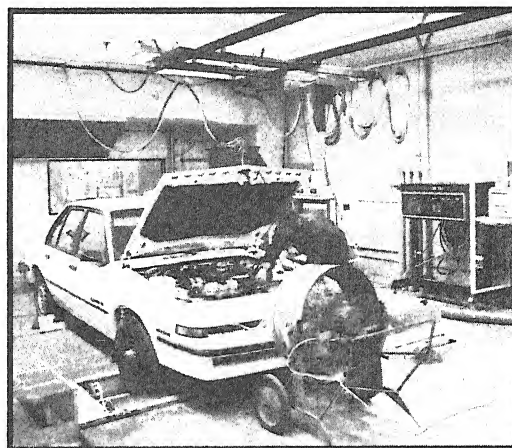
#### Purpose

The purpose of this CRADA is to commercialize new technologies to measure evaporative emissions and hard-to-detect low-level exhaust emissions from cars and trucks. AIGER's goal is to encourage, develop, and evaluate facilities and techniques to help industry and government agencies properly test vehicles in accordance with the Clean Air Act Amendments (CAAA) of 1990 and recent California standards.

Research will focus primarily on methods of detecting low-level emissions of hydrocarbons, carbon monoxide, oxides of nitrogen and non-methane organic gases. The detection of specific hydrocarbons, oxygenates and other compounds emitted from conventional and alternate-fuel vehicles will also be studied.

#### Background

As a result of lower emission standards set forth in amendments to the Clean Air Act in 1990, auto makers will be required to set emission output levels for their vehicles at rates which current equipment and methods are not readily capable of detecting. The technology developed through this CRADA will provide auto makers and regulatory agencies at both the State and Federal levels with the resources needed to help measure and further reduce vehicle emissions.



*Vehicle-testing at National Vehicle and Fuel Emissions Laboratory.*

#### Benefits to Government and Industry

A major result of this research activity will be the commercialization of specialized instrumentation to measure ultra-low levels of various types of exhaust emissions in an accurate, precise and efficient manner. Another result will be the development of facilities, equipment and techniques to measure evaporative emissions under carefully controlled conditions.

This relationship will also make it possible for sufficient quantities of the best possible instruments to be made available to industry in the shortest possible time frame. Research can also be accomplished in a cost-effective manner since the government and the automotive industry, the two largest markets for these products, will be working together to create common specifications and methods of evaluation.

The program began in October 1992, and is expected to run five years with total "in-kind" contributions of the participants estimated at over \$5 million.

This is one of 50 cooperative research and development agreements EPA has with various U.S. businesses, academic institutions and state and local governments under the Federal Technology Transfer Act of 1986. These agreements



serve as a mechanism for the federal government to work with companies to develop new pollution control technologies and efficiently bring them into the marketplace.

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